



Learning Approaches and Students' Academic Performance in Cost Accounting in State Universities in South-South, Nigeria

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ABSTRACT

This study evaluated learning approaches and students' academic performance in cost accounting in State Universities in South-South, Nigeria. The study adopted correlational design and was conducted in State Universities in South-South, Nigeria. The population of the study was 3,600 year II Accounting students in the State Universities in South-South, Nigeria. Taro-Yamen's formula was used to determine the sample size of the study which was 360 respondents using proportionate sampling technique. Two research questions guided the study and two null hypotheses were formulated and tested at 0.05 level of significance. The instrument used for data collection was a structured questionnaire titled "Learning Approach and Cost Accounting Students' Performance Inventory (L.A.C.A.S.P.I.). The instruments were validated by three Business Educators (experts), from the Department of Business Education in the Faculty of Education of the Rivers State University. To establish the reliability of the instruments, the instrument was correlated using Pearson Product Moment Correlation Coefficient (r) formula, yielding a reliability coefficient of 0.87. Data collected were analyzed using mean and standard deviation. The null hypotheses were tested using Pearson Product Moment Correlation Coefficient (r) formula at 0.05 level of significance. Findings from the study revealed that problem-based learning and guided discovery learning approaches relates with students' academic performance in cost accounting to a high extent. Based on the findings, the study recommended among others that practical skills learning approaches adjudged (problem-based learning and guided discovery learning approaches) should be employed by lecturers in the classroom in order to improve students' academic performance in cost accounting; and Government at all levels should support State Universities in South-South, Nigeria by providing modern, relevant and adequate facilities for effective training and instructional delivery of cost accounting.

Keywords: Learning Approaches, Academic Performance, Cost Accounting.

INTRODUCTION

Accounting as a specialized disciplined and practical course is taught and learnt in higher institutions such as Polytechnics, Colleges and Universities. As a broad course, it covers areas such as cost accounting, management accounting, financial accounting and so on. Knowledge acquired in this field enables its recipients to specialize in this various field as cost accountant, financial accountant, auditors and so on. It is therefore imperative that students are grounded in the subject as to attain such prestigious position after graduation. This can be achieved when the individual (students) is fully engaged in the learning process that will enable them to perform excellently.

According to Ogwo and Oranu in Daramola (2014), learning is the processes by which some meaningful activities enable the learner acquire knowledge and experiences that tend to influence his or her future behaviour provided that the characteristics of the change in behaviour cannot be explained on the basis of native response tendencies, maturation or temporary state of the learner. In the same vein, learning is

described as a modification of an individual behaviour in a particular area or field of study so that his or her behaviour is changed in a more permanent basis (Ndukwe, 2018). It is also the active process that leads to a change within an individual due to the acquisition of skills, knowledge and attitude. One cannot be a good learner until his or her intention for learning is ascertained. It is because of this arduous task that learning approaches have been innovated. Learning approach is described as the different or various ways in which students study on their own. It is also known as student-centered approach indicating that students are fully involved in the teaching and learning process while the lecturer serves as a guide or an instructor (Iroanya, 2020). It is a matter of choice by the lecturer or teacher to adopt whatever learning approach or method that suits a particular content for the learner. This development has given rise to the use of learning approaches such as problem-based learning, guided discovery learning, cooperative learning approaches among others.

Cost accounting, as a skilled course seeks to achieve one of the goals derived from National Policy on Education (2013), which requires individual to acquire appropriate skills and to develop mental, physical and social abilities as well as competencies as equipment for them to live and contribute to the development of the society. This goal is achievable when students are able to comprehend and assimilate the course adopting various learning approaches that will affect their performance positively. The concept of performance is general to all fields of human endeavour. However, the student's potential is related to his or her actual performance through learning. Academic performance is therefore viewed as the level of performance in a particular field of study such as cost accounting (Mweti, 2013). Ige (2016) posited that academic performance is the scholastic standing of a student at a given moment. This scholastic standing could be explained in terms of the grades obtained in a courses or group of courses. Adeyemi (2011) explained that performance is a measure of output, and that the main output in education are expressed in terms of learning, that is, changes in knowledge, skill and attitudes of individuals as a result of their experiences within the school's system. Egbule as cited in Ebenuwa-Okoh (2010) viewed academic performance as participants' examination grades (grade point average at the end of a particular semester of programme). It refers to the score attained by an examinee in an administered standardized test.

Based on the definitions of academic performance, the researchers are of the opinion that students' performance in cost accounting is dependent on the learning approaches (**problem-based learning** and **guided discovery**) adopted. According to Barrows and Tamblyn (1980), problem-based learning is student-centric and begins with a real or replicated problem that attempts to stimulate students to solve the problem through the development of positive skills and attitudes as well as critical thinking, and to look for more consistent and long-lasting knowledge on the research theme, that is the problem. The Accounting Education Change Commission (AECC) posited that accounting curriculum design should be guided by a problem-based learning approach indicating that students should be prepared for lifelong learning which entails "learning by doing" and "group learning" (AECC, 1990, p.309). Supporting the view of Accounting Education Change Commission, Milne and McConnell (2001) advocated the incorporation of problem-based learning approach into accounting education. Hung (2009) posited that the design of problems which he developed as "**3C3R**" is crucial for problem-based learning to be effective. The 3Cs represent content, context and connection, while the 3Rs comprise researching, reasoning, and reflecting, which support the cognitive processes of problem solving skills and self-directed learning. In this regard, students are presented with a problem (e.g., case, videotape, a research paper); then in groups, they organize their ideas and attempt to define the broad nature of the problem, pose questions, and define and rank learning issues that they do and do not understand. Issues are assigned to each group and individuals within each group choose a particular issue to research and later teach to the other members of their group. Students and the instructor or lecturer identify resources to research learning issues. The students reconvene, integrating their new knowledge into the context of the problem, and continue to define new learning issues as they progress through the problem (Boud & Feletti, 1997). This approach is recommended by Kanet and Barut (2003) as it provide an ample opportunity for students to develop critical-analytic reasoning capability that will motivate them to be active agents in the learning process as becoming cost accounting graduates. Hsu, Yen and Lai (2015)

emphasized that problem-based learning approach enhances students' independent learning ability, teamwork, and integration of knowledge, problem-solving skills, critical thinking and lifelong learning capacity.

According to Olorode (2016), guided discovery approach is an instructional method that emphasizes students' active involvement in the learning process and enables them to think together with a view to discovering knowledge under the guidance of the teacher especially in calculation subjects like cost accounting. This approach is thus an inquiry-based, student-centered and an activity-oriented approach which allows the cost accounting teacher to use varieties of instructional materials and probing questions, to enable students discover answers to cost accounting problems (Modebelu & Duvie, 2012). Adopting guided discovery approach in practical courses such as cost accounting, Bicknell, Holmes and Hoffman (2000) explained that learning is active rather than passive; learning is activity-based and process-oriented rather than content-oriented while failure is important for future success; feedback is necessary for control measures and deeper understanding is ensured. In this regard, Garuma and Tesfaye (2012) explained that using this approach, the teacher invites students to initiate discussion and to react to other students' ideas which is based on the background knowledge and understanding of the learner. To Garuma and Tesfaye, the learners' background knowledge and understanding are most important consideration for effective use of this approach indicating that it improves the understanding of cost accounting because students have background knowledge in accounting subject from secondary school. This is based on the fact that cost accounting offered in universities is aimed at building on the past experience and prior knowledge of the students from secondary schools (Olorode & Jimoh, 2016). Accordingly, Olorode and Jimoh (2016) opined that guided discovery approach is learner-centered, democratic and interactive. It improves the academic performance of students in cost accounting as they are able to reason, discover facts and develop self-confidence in solving cost accounting problems. Hence, self discovery of more knowledge and better understanding of its (cost accounting) content can be achieved through guided discovery. In buttressing this fact, Ekhasemomhe (2010) noted that students are likely to remember concepts they discover on their own rather than the concepts they are taught. As such, students ought to be responsible, autonomous and construct their own understanding of each concept discovered.

Statement of the Problem

The academic performance of every student majorly depends on the type of teaching strategy employed by the lecturers during instruction. Consequently, the teaching strategy adopted in our academic institutions is appalling especially on practical courses such as cost accounting. For instance, the use of lecture and memorization strategy which is teacher-centred has been often used in teaching of this practical course in State Universities in South South, Nigeria as observed by the researchers. In this regard, students' performance has deteriorated in practical courses such as cost accounting. Cost accounting as a specialized course involves skills that cannot be mastered by mere lecture method and memorization of basic rules. As stated by Sinclair (2015), mastering a skilled course requires active involvement of learner in the teaching and learning process. The lack of in-depth knowledge acquired by cost-accounting students, as a result of traditional method adopted in teaching and learning approaches negatively affects their performance. In order to find a lasting solution to this existing problem, it becomes imperative to introduce problem-based learning and guided discovery learning as an alternative approach to the teaching and learning of cost-accounting in State Universities in South-South, Nigeria.

Purpose of the Study

The general purpose of this study was to evaluate learning approaches and students' academic performance in cost accounting in State Universities in South-South, Nigeria. Specifically, the study sought to achieve the following:

1. Ascertain the extent to which problem-based learning as an aspect of learning approach relates with students' academic performance in cost accounting.
2. Ascertain the extent to which guided discovery learning as an aspect of learning approach relates with students' academic performance in cost accounting.

Research Questions

The following research questions guided the study.

1. To what extent does problem-based learning as an aspect of learning approach relates with students' academic performance in cost accounting?
2. To what extent does guided discovery learning as an aspect of learning approach relates with students' academic performance in cost accounting?

Hypotheses

The following null hypotheses formulated were tested at 0.05 level of significance.

Ho₁: There is no significant relationship between problem-based learning as an aspect of learning approach and students' academic performance in cost accounting in State Universities in South-South, Nigeria.

Ho₂: There is no significant relationship between guided discovery learning as an aspect of learning approach and students' academic performance in cost accounting in State Universities in South-South, Nigeria.

RESEARCH METHODS

This study adopted the correlational design in order to establish the relationship between learning approaches and students' academic performance in cost accounting in State Universities in South-South, Nigeria. The area of the study was South-South region in Nigeria. The population of this study is 3,600 year II Accounting students in the State Universities in South-South, Nigeria. A sample size of 360 respondents was determined scientifically by the use of Taro-Yamen formula using proportionate sampling technique for the study. The instrument used for data collection was a structured questionnaire titled "Learning Approach and Cost Accounting Students' Performance Inventory (L.A.C.A.S.P.I.). The questionnaire was designed on 4 point rating scale of Very High Extent (VHE-4 points), High Extent (HE-3points), Moderate Extent (ME-2points), and Low Extent (LE-1point).The L.A.C.A.S.P.I designed for data collection was subjected to face validity by three experts in Business Education. The reliability of the instrument was established through test-retest method using Pearson Product Moment Correlation Coefficient (r) formula, yielding a reliability coefficient of 0.87. The copies of questionnaires administered to the respondents were done with the aid of five trained research assistants. Data collected was analyzed using mean and standard deviation for the research questions while the hypotheses were tested using Pearson Product Moment Correlation Coefficient (r) formula.

RESULTS**Research Question 1**

To what extent does problem-based learning as an aspect of learning approach relates with students' academic performance in cost accounting?

Table 1: Computation of Mean and Standard Deviation of Responses on Extent Problem Based Learning Relates with Students' Academic Performance in Cost Accounting

(N = 306)				
S/No.	Statements	\bar{x}_1	SD	Remarks
1.	Problem-based learning approach encourages students to independently work harder to enhance positive performance	3.25	0.69	High Extent
2.	Problem-based learning approach require critical thinking in solving cost accounting problems	3.30	0.65	High Extent
3.	Problem-based learning approach provides new knowledge and perception in solving cost accounting problems	2.65	0.88	High Extent
4.	Problem-based learning approach provides opportunities for students to support each other in the learning process	3.39	0.56	High Extent
Total Mean/Std. Dev.		12.59	2.78	
Grand Mean/Std. Dev.		3.15	0.70	

The data presented in Table 1 shows an item-by-item analysis of respondents view on the extent to which problem-based learning as an aspect of learning approach relates with students' academic performance in cost-accounting. All the items (1-4) with mean values of (3.25, 3.30, 2.65, and 3.39) and standard deviations of (0.69, 0.65, 0.88, and 0.56) fall within the range of high extent (HE). An aggregate mean of 3.15 and standard deviation of 0.70 implies that the respondents hold the view that problem-based learning approach relates with students' academic performance in cost accounting to a high extent.

Research Question 2

To what extent does guided discovery learning as an aspect of learning approach relates with students' academic performance in cost accounting?

Table 2: Computation of Mean and Standard Deviation of Responses on Extent Guided Discovery Learning Relates with Students' Academic Performance in Cost Accounting

(N = 306)				
S/No.	Statements	\bar{x}_1	SD	Remarks
5.	Guided discovery learning enable learners to discover facts in solving cost accounting problems	3.42	0.49	High Extent
6.	Guided discovery learning develop students skills of observation, exploration and questioning	3.18	0.71	High Extent
7.	Guided discovery learning enables students to become active participants in the classroom	3.44	0.50	High Extent
8.	Guided discovery learning builds self-confidence in students on the knowledge discovered	3.33	0.68	High Extent
Total Mean/Std. Dev.		13.37	2.38	
Grand Mean/Std. Dev.		3.34	0.60	

The data presented in Table 2 above, revealed the extent to which guided discovery learning as an aspect of learning approach relates with students' academic performance in cost- accounting. All the items of guided discovery learning as an aspect of learning approach falls within the range of high extent (HE) with mean values of (3.42, 3.18, 3.44,and 3.33) and standard deviations of (0.49, 0.71, 0.50, and 0.68). An aggregate mean of 3.34 and standard deviation of 0.60 implies that respondents affirmed that guided discovery learning approach relates with students' academic performance in cost accounting to a high extent.

Hypotheses

Hypothesis 1

Ho₁: *There is no significant relationship between problem-based learning as an aspect of learning approach and students' academic performance in cost accounting in State Universities in South-South, Nigeria.*

Table 3: Summary of r-cal Analysis on the Relationship between Problem Based Learning and Students' Academic Performance in Cost Accounting

Variables	N	$\sum x$ $\sum y$	$\sum x^2$ $\sum y^2$	$\sum xy$	α	Df	r-cal	r-crit	Decision
Problem-Based (x)	306	815.12	2257.78						
Academic Performance (y)	306	875.63	2591.13	2415.02	0.05	304	0.96	0.14	Significant

Table 3 revealed the r-calculated value as 0.96 and r-critical or table value as 0.14 on problem-based learning approach and students' academic performance. Since the computed value is greater than the critical value, the null hypothesis of no significant relationship is rejected. This implies that problem-based learning approach is significantly related to academic performance in cost accounting.

Hypothesis 2

Ho₂: *There is no significant relationship between guided discovery learning as an aspect of learning approach and students' academic performance in cost accounting in State Universities in South-South, Nigeria.*

Table 4: Summary of r-cal Analysis on the Relationship between Guided Discovery Learning and Students' Academic Performance in Cost Accounting

Variables	N	$\sum x$ $\sum y$	$\sum x^2$ $\sum y^2$	$\sum xy$	α	Df	r-cal	r-crit	Decision
Active (x)	306	761.63	1978.30						
Academic Performance (y)	306	875.63	2591.13	2255.52	0.05	304	0.91	0.14	Significant

The data in Table 4 showed the Pearson's Product Moment Correlation Coefficient (PPMCC) r-calculated value of 0.91 between guided discovery learning approach and academic performance of students in State Universities in South-South, Nigeria. Since the calculated r-value of 0.91 is less than the r-critical or table value of 0.14, the null hypothesis of no significant relationship is rejected. This implies that guided discovery learning approach is significantly related to academic performance in cost accounting.

DISCUSSION OF FINDINGS

The result of research question one showed that problem-based learning approach relate with students' academic performance in cost accounting to a high extent. This finding is in line with the view of Kanet and Barut (2003) who opined that problem-based learning approach provide opportunity to develop critical-analytic reasoning capability that is necessary for accountancy graduates. Agreeing with the opinion of Kanet and Barut, Hsu, Yen and Lai (2015) emphasized that problem-based learning approach enhances students' independent learning ability, teamwork, and integration of knowledge, problem-solving skills, critical thinking and lifelong learning capacity.

From the result of research question two it was revealed that guided discovery learning approach relates with students academic performance in cost accounting to a high extent. This agrees with the assertion of Ekhasemomhe (2010) who observed that students are likely to remember concepts they discover on their own rather than the concepts they are taught. Olorode and Jimoh (2016) confirmed that it improves the academic performance of students in cost accounting as they are able to reason, discover facts and develop self-confidence in solving cost accounting problems.

CONCLUSIONS

Based on the findings of the study, the researchers concluded that problem-based learning approach and guided discovery learning approach relates with students' academic performance in cost accounting to a high extent in State Universities in South-South, Nigeria. Thus, students will perform better when these learning approaches are adopted under the guidance of a teacher as well as discover facts in solving cost accounting problems.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

1. Practical skills learning approaches adjudged (problem-based learning and guided discovery learning approaches) should be employed by lecturers in the classroom in order to improve students' academic performance in cost accounting.
2. Government at all levels should support State Universities in South-South, Nigeria by providing modern, relevant and adequate facilities for effective training and instructional delivery of cost accounting.

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